P. 79. *Heterocampa thyatiroides.* Not identified.
P. 82. *Miresa divergens*=*Lithacodes fasciola*, H.-S.
P. 90. *Gora æqualis.* Not identified.
P. 94. *Erysthia obliquata* (locality doubtful). Not identified.
P. 95. *Cottobara concinna.* A Notodont.
P. 95. *Gaphara sobria.* Allied to *Celæna tetera.*
P. 97. **Nœnia signiplena* belongs to the genus *Pœsula.*
P. 101. **Asthana erecta*=*Pœsula transversaria*, Walk.
P. 101. **Asthana directa* belongs to the genus *Pœsula.*
P. 102. *Baniana inæqualis.* A distinct species.
P. 103. *Gammace magniplaga.* Not identified.
P. 104. **Remigia consistens*=*Renodes brevipalpis*, Gn.
P. 104. *Gangra atripustula* belongs to the Thermesiidæ.
P. 105. *Focilla abrupta* belongs to the Thermesiidæ.
P. 108. **Marthama conspersa*=*M. squamivaria*, Walk.
P. 109. **Hypena murina*=*H. exoletalis*, Gn., in B. M.
P. 115. **Bocana marginalis*=*B. orionalis* ♂, Walk.
P. 122. *Salbia varialis* belongs to the genus *Phostria.* In B. M.
P. 122. *Asopia depressalis.* Not identified.
P. 124. *Cutaclysta insulalis.* A distinct species.
P. 126. *Scopula desistalis* belongs to the genus *Elulea.*
P. 127. *Scoparia fascialis*=*Hapalia illibalis*, Hübn.
P. 259. *Hadena opima.* Not identified.
P. 260. *Poaphila plagiata.* Not identified.
P. 260. *Poaphila figurata.* Not identified.
P. 260. *Phurys menswata.* Not identified.
P. 260. **Hypena scissilinea* belongs to the genus *Saserna* and is well figured in the Biol. Centr.-Amer.
P. 271. *Rhagonis bicolor.* Not identified.
P 277. **Pœcilocampa plurilinea*=*Tolype opalina*, Walk.

4. Further Contributions to our Knowledge of the Bornean *Lycænidæ.* By Hamilton H. Druce, F.Z.S., F.E.S.

[Received June 15, 1896.]

(Plates XXIX.–XXXI.)

Since June last year, when I had the honour of bringing before the Society a paper[1] dealing with this family of Butterflies, a large amount of fresh material has come to hand.

Dr. Staudinger has received many more specimens from his collector Waterstradt, and Mr. D. Cator has placed in my hands for examination a number of specimens captured by himself and procured from collectors in the island. Amongst these I have found several of considerable interest, which are now recorded here for the first time. Mr. Cator writes me that the places at which he captured specimens are:—Segalind and Sapagaya, which are rivers falling into different parts of Sandakan Bay; Melikop

[1] See P. Z. S. 1895, p. 556.

(=Penungah) and Tanganak and Banguey, all three small islands a few miles off the coast belonging to the British North Borneo Company.

Some 42 species are now recorded here for the first time from Borneo, a list of which will be found below. 19 of these are described as new.

List of Species not recorded from Borneo in P. Z. S. 1895.

Those marked * are described as new.

*Gerydus improbus, *H. H. Druce.*
Lognania malayica, *Distant.*
Hypochrysops cœlisparsus, *Butler.*
Zarona jasoda, *de Nicév.*
Simiskina solyma, *de Nicév.*
Cyaniris cameræ, *de Nicév.*
* ,, sonchus, *H. H. Druce.*
Nacaduba hermus, *Feld.*
,, noreia, *Feld.*
*Lampides daones, *H. H. Druce.*
*Arhopala tamcanga, *Bethune-Baker.*
,, meander, *Boisd.*
* ,, semperi, *Bethune-Baker.*
* ,, dajagaka, *Bethune-Baker.*
* ,, drucei, *Bethune-Baker.*
,, vihara, *Feld.*
,, pseudomuta, *Staud.*
* ,, kounga, *Bethune-Baker.*
* ,, bella, *Bethune-Baker.*
* ,, havilandi, *Bethune-Baker.*
,, diardi, *Hew.*
,, morphina, *Distant.*
*Arhopala borneensis, *Bethune-Baker.*
* ,, labuana, *Bethune-Baker.*
* ,, waterstradti, *Bethune-Baker.*
* ,, moorei, *Bethune-Baker.*
* ,, deva, *Bethune-Baker.*
* ,, sandakani, *Bethune-Baker.*
Acesina, sp. ?
Curetis insularis, *Horsf.*
Tajuria blanka, *de Nicév.*
* ,, bereuis, *H. H. Druce.*
Charana mandarinus, *Hew.*
*Mantoides licinius, *H. H. Druce.*
Thrix gama, *Distant.*
Marmessus boisduvali, *Moore*, var. atra, nov.
Lebera anna, *H. H. Druce.*
Deudorix diara, *Swinhoe.*
* ,, strephanus, *H. H. Druce.*
Rapala suffusa, *Moore.*
,, abnormis, *Elwes.*
Virachola smilis, *Hew.*

The two following species from adjacent localities are also described as new:—

Paragerydus melos, from Cagayan.
Tajuria dacia, from Java.

Gerydus, Boisd.

Gerydus improbus, sp. n. (Plate XXIX. figs. 1 ♂, 2 ♀.)

♂. Allied to *G. innocens*, mihi. Upperside: fore wing with the white area more extensive over the cell and with the usual swollen median nervule; hind wing wholly black. Underside: colour and markings much like *G. innocens*, but with a large reddish-brown patch on outer margin of the fore wing about the middle and also in a similar position on the hind wing, where it decreases in intensity inwardly.

♀. Upperside differs only from the male in the white area of the fore wing being slightly more extensive, and in the hind wing being paler. Underside: ground-colour paler than in male, with the reddish-brown patches brighter and more conspicuous. Cilia in both sexes reddish brown on both surfaces, but more conspicuous in the female.

Expanse, ♂ ♀, $1\frac{1}{10}$ inch.

Kina Balu (*Waterstr.*). Type Mus. Staud.

This species appears to be quite distinct, and the black hind wings above and the reddish-brown patches below should at once separate it from its allies [1].

Paragerydus, Distant.

Paragerydus pyxus.

Paragerydus pyxus, de Nicév. J. A. S. B. vol. lxiii. no. 1, p. 27, pl. v. fig. 2, ♂ (1894).

Labuan (*Wahnes*); Sandakan, Sapagaya, and Melikop (*Cator*).

Dr. Staudinger has sent me several specimens which appear to be referable to this species, and Mr. D. Cator has also captured it.

Paragerydus waterstradti, H. H. Druce.

Mr. Cator captured this species at Sapagaya.

Mr. Cator has also obtained a long series of specimens of an allied species from the island of Cagayan, which I believe is unnamed and have ventured to describe below [2].

Paragerydus aphocha.

Allotinus aphocha, Kheil, Rhop. Ins. Nias, p. 28, pl. v. fig. 30 (1884).

[1] Mr. de Nicéville is mistaken in supposing that the *Miletus zymna*, Doubl. & Hew., is a true *Gerydus* (see J. A. S. B. lxiv. p. 445, 1895), as the structure of the legs at once proves that it is not congeneric. Dr. F. Karsch has lately placed this species, together with another from W. Africa (*M. metaleucus*, Karsch), in the genus *Megalopalpus*, Röber (Berlin. entom. Zeits. 1893, p. 217). We possess specimens of *M. zymna*, and on examination I find that they agree with the figures given by Herr Röber so far as the legs and palpi are concerned, but that the neuration does not exactly correspond with the neuration as there figured. I, however, still hold the same opinion as I expressed in P. Z. S. 1895, p. 561, footnote. On the other hand, Mr. Grose Smith has recorded *Miletus zymna*, Doubl. & Hew., from Sumatra, but Mr. de Nicéville and Dr. Martin did not obtain specimens. There is some confusion with regard to *Megalopalpus*, which I regret I cannot clear up.

An examination of the types of *Gerydus boisduvalii*, Butler (Ann. Mag. Nat. Hist. ser. 5, vol. xiii. 1884, p. 194), proves that they are synonymous with *G. leos*, Guér., the female of which is well figured in the 'Voyage de *La Coquille*' (pl. 18. fig. 8, 1829)—the specimens which Dr. Butler referred to *G. leos* being the recently described *G. maximus*, Holland, from Celebes. Of course, *G. boisduvalii*, Butler, could not in any case stand, as Mr. Moore, so long ago as 1857, described another species under the name *boisduvali*, with which the Amboinese species is strictly congeneric.

[2] Paragerydus melos, sp. n.

Closely allied to *P. horsfieldi*.

♂. Upperside much darker brown, with the discal patch paler and more conspicuous; underside pale grey, with the marginal rows of spots in each wing dark and distinct.

♀. Dark brown above, very slightly paler on the disc of the fore wing; underside as male, but ground-colour paler. The outer margin of the hind wing is much more dentate than in that sex of *P. horsfieldi*.

Expanse, ♂ 1$\frac{3}{16}$–1$\frac{1}{4}$ inch, ♀ 1$\frac{3}{16}$–1$\frac{1}{4}$ inch.

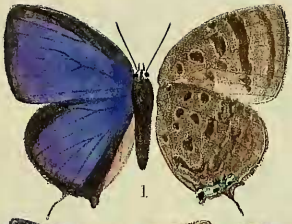
Hab. Cagayan. Types Mus. Cator and Druce.

A number of specimens were obtained in June, which vary only in size.

W. Purkiss lith.

West, Newman imp.

Bornean Lycænidæ.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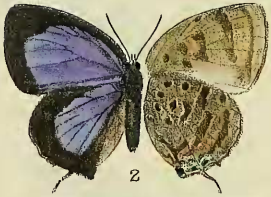
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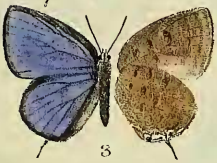
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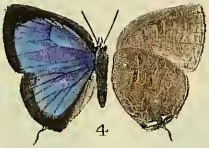
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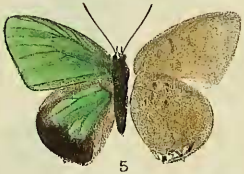
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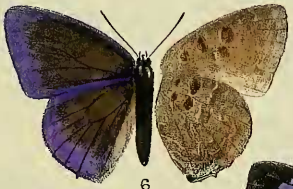
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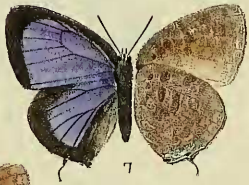
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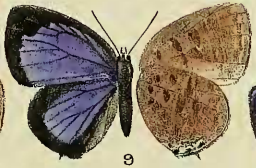
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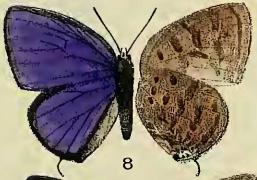
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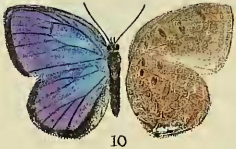
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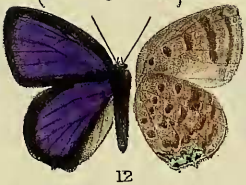
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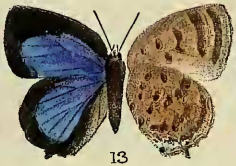
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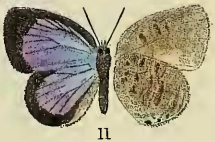
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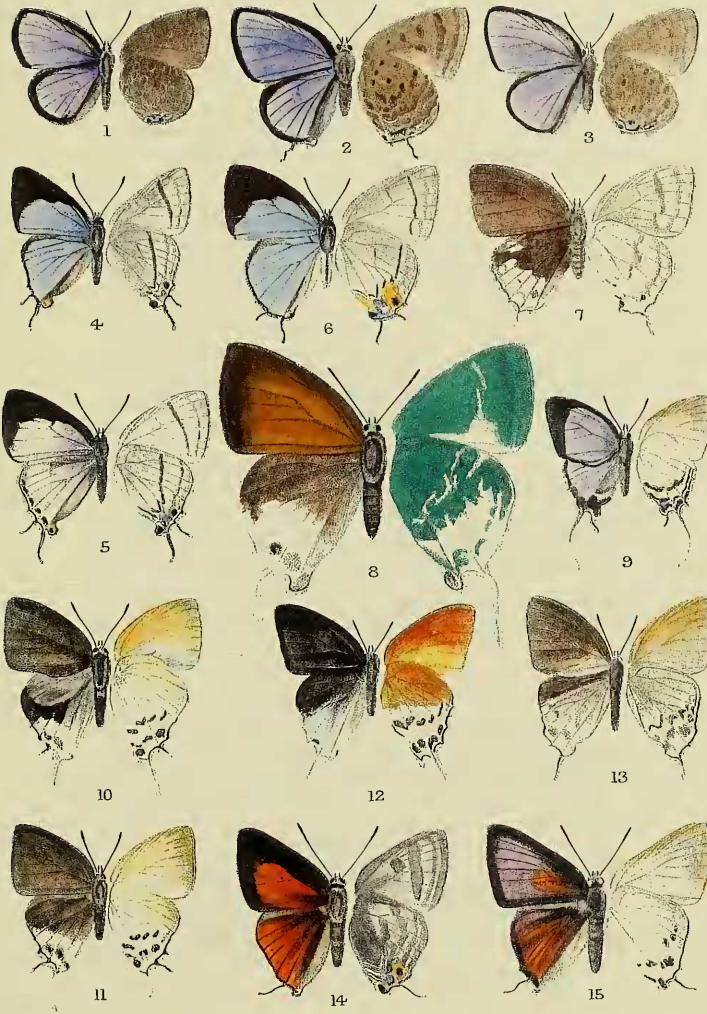
W.Purkiss lith.

West, Newman imp.

Bornean Lycænidæ.



W.Purkiss lith.

West, Newman imp.

Bornean Lycænidæ

Kina Balu (*Waterstr.*).

Wahnes has also sent several more specimens of this species to Dr. Staudinger.

Allotinus, Feld.

Allotinus subviolaceus, Feld.

Mr. D. Cator captured several specimens at Sandakan in March.

Logania, Distant.

Logania malayica, Distant.

Mr. de Nicéville records this insect from S.E. Borneo (J. A. S. B. vol. lxiii. pt. 2, no. 1, p. 29, 1894); and Mr. D. Cator captured it at Sandakan in January.

Logania regina, Druce.

Melikop and Banguey Is. (*Cator*).

The two specimens obtained by Mr. Cator have less white along the inner margins of the fore wing below than in the type, and thereby approach *L. sriwa*, Distant. They were taken in the month of October.

Logania obscura, Distant & Pryer.

Mr. Cator obtained two females at Sandakan in April which may possibly belong to this species. On the upperside they differ from that sex of *L. staudingeri* in having the disc of the fore wing white, in its base being dusky, in the costal margin being much more narrowly brown, and in the hind wing being dull brown, very slightly dusted with whitish.

In the figure given in P. Z. S. 1895, pl. xxxi., of *L. staudingeri* ♂, the disc of the fore wing appears pure white; this is incorrect, it should be pale greyish blue.

Cyaniriodes, de Nicév.

Cyaniriodes libna, Hew. (Plate XXIX. fig. 3, ♂.)

Mr. Cator has kindly lent me the specimen described in P. Z. S. 1895, p. 565, to figure, which is in his collection. He captured it in June 1894, about 8 o'clock in the morning, flying in a cocoanut plantation.

Hypochrysops, Feld.

Hypochrysops cœlisparsus, Butler.

Miletus cœlisparsus, Butl. Ann. Mag. Nat. Hist. ser. 5, vol. xii. p. 159 (1883).

Hypochrysops cœlisparsus, H. H. Druce, Trans. Ent. Soc. 1891, p. 188, pl. x. figs. 10, 11.

Sandakan and Libaran I. (*Cator*).

Mr. Cator was fortunate in capturing two fine specimens of this beautiful species, which is recorded now for the first time from Borneo. They are larger than the type, and differ from it in the band beyond the cell in the fore wing below being somewhat less straight and rather more broken up. But this difference appears to me much too slight to constitute it a distinct species.

ZARONA, de Nicév.

ZARONA JASODA, de Nicév.

Zarona jasoda, de Nicév. J. A. S. B. vol. lvii. pt. 2, p. 280, pl. xiv. fig. 5, ♂ (1888); id. Butt. Ind. etc. p. 34, pl. xxv. fig. 144, ♂ (1890).

Sandakan.

Mr. D. Cator captured a single male specimen in July, which is the only one I have seen from Borneo.

PORITIA, Moore.

PORITIA SUMATRÆ, Feld.

Brunei (*Waterstr.*).

Dr. Staudinger's collector has obtained examples of this species on the mainland. In Sumatra, Mr. de Nicéville states that, with *P. philota*, Hew., it is less rare than the others belonging to the genus.

PORITIA PHALUKE, H. H. Druce.

Mr. D. Cator procured both sexes at Sandakan in April and in August.

SIMISKINA, Distant.

SIMISKINA PHALÆNA, Hew.

When referring to this species, I placed it in the genus *Poritia*; but as it is without the tuft of hair near the base of the submedian nervure in the hind wing, it is perhaps better placed in *Simiskina*, where it has been included by Mr. de Nicéville. The second tuft of hair in all the specimens I have examined is hardly discernible; and is entirely absent in all specimens of *S. pharyge*, Hew., that I have before me [1].

These facts seem to point to the conclusion that in this case the absence or presence of these tufts is not of generic importance, and that *Simiskina* cannot stand. Mr. de Nicéville has lately described and figured the female of *S. phalena*, Hew. (Journ. Bombay Nat. Hist. Soc. ix. p. 270, pl. O. fig. 13, 1895), so that I appear to have quite incorrectly considered his *S. solyma* to be the female. The general resemblance of the undersides and the receipt of the two sexes from the same locality led me to believe that they belonged to the same species. Mr. D. Cator has sent me for examination two females taken at Sandakan in July.

[1] See also my remarks on *Poritia philura*, mihi, P. Z. S. 1895, p. 569.

SIMISKINA SOLYMA.

Simiskina solyma, de Nicév. J. A. S. B. vol. lxiii. pt. 2, p. 29, pl. iv. fig. 10 (1894).

Labuan (*Waterstr.*).

The female only is known.

NEOPITHECOPS, Distant.

NEOPITHECOPS ZALMORA, Butler.

Mr. de Nicéville states that "*Cupido talmora*, Butler" of Druce, P. Z. S. 1873, p. 348, is a synonym of *N. zalmora* (see J. A. S. B. vol. lxiv. p. 451). The name *talmora* appears to me to be so clearly a misprint that comment is unnecessary.

CYANIRIS, Dalman.

CYANIRIS CAMENÆ.

Cyaniris camenæ, de Nicév. Journ. Bomb. Nat. Hist. Soc. vol. ix. p. 278, pl. O. fig. 22 (♂).

Kina Balu (*Waterstr.*).

C. camenæ is very close to *C. selma*, mihi, but differs in the darker shade of its blue, in the spots on the underside being about equally conspicuous, and in its considerably larger size.

CYANIRIS SONCHUS, sp. n. (Plate XXIX. fig. 4, ♂.)

♂. Allied to *C. cossæa*, de Nicév. Upperside blue, of a darker shade, and with the black margins distinctly wider. Fore wing with a black mark partially closing the cell; hind wing entirely without the white fascia at the apex, and with the costal margin wholly black. Underside creamy white, with the spots arranged as in *C. cossæa*, but more prominent, especially those forming the marginal and submarginal series.

Expanse 1½ inch.

S.E. Borneo (*Wahnes*). Type Mus. Staud.

C. sonchus, together with *C. cossæa*[1], de Nicév., and *C. plauta*[2], mihi, form a small group in the genus, which can be at once distinguished by the yellowish-white ground-colour of the underside.

CYANIRIS PLAUTA, H. H. Druce.

Dr. Staudinger has received a specimen (♂), taken at an altitude of 3000 metres on Kina Balu, in which the white patch on the apex of the hind wing above has almost disappeared, and on the underside the spots are smaller and the ground-colour greyer.

C. plauta usually has a black spot on the costal margin of the hind wing below, over the spot in cell as in *C. cossæa*, but this spot is not always present and in the example figured is absent.

[1] *C. cossæa*, de Nicév. Journ. Bomb. Nat. Hist. Soc. vol. ix. pl. O. figs. 14, 15 (1895).

[2] *C. plauta*, H. H. Druce, P. Z. S. 1895, p. 574, pl. xxxii. figs. 8, 9.

NACADUBA, Moore.

NACADUBA HERMUS, Feld.

Lycæna hermus, Feld. Sitz. Ak. Wiss. Wien, Math.-nat. Cl. xl. p. 457. no. 33 (1860).

Kina Balu (*Waterstr.*).

Mr. de Nicéville has examined Felder's type, and states that *N. viola*, Moore, is a synonym of this species.

NACADUBA NOREIA.

Lycæna noreia, Feld. Verh. zool.-bot. Ges. 1868, p. 282.

Labuan (*Wahnes*).

Dr. Staudinger has received the tailless form of *N. ardates*, Moore, which according to Mr. de Nicéville (he having seen the type of *L. noreia* at Vienna) equals that species.

NACADUBA ALUTA, Druce.

I think it is most probable that the species *N. nanda* described by Mr. de Nicéville in Journ. Bomb. Nat. Hist. Soc. vol. x. p. 34, pl. S. fig. 23 (1895), is the same as *N. aluta*. *N. aluta* has the prominent white anteciliary thread in the three anal interspaces as described by Mr. de Nicéville, but on the underside of the fore wing the anteciliary line only is straight, the other two lines being lunulated, both much to the same extent, the spaces between the lines being darker, as described in *N. nanda*[1].

LAMPIDES DAONES, sp. n. (Plate XXIX. fig. 5, ♂.)

♂. Upperside pale shining silvery blue, appearing of a greenish shade in some lights. Fore wing: costal margin very narrowly, apex and outer margin broadly, dull black. Hind wing dull black, with the blue colour extending just over and around the cell only; inner margin paler; a marginal row of indistinct black lunules edged with sordid white, the one between the lower median nervules being large and distinct, followed by a black anteciliary line. Tail black, tipped with white. Cilia of fore wing dull black, of hind wing sordid white, black at the extremities of the nervules. Underside pale greyish brown, with white lines arranged exactly as in *L. elpis*, Godt., but in the hind wing rather straighter. Thorax and abdomen above and below concolorous with wings. Antennæ black, spotted with white.

Expanse 1½ inches.

Penang. Mus. Cator and Druce.

On the upperside this butterfly appears to be allied to *L. mara-*

[1] Mr. de Nicéville states, in the list of Sumatran Butterflies, that he thinks *N. perusia*, Felder, is probably a synonym of *N. atrata*, Horsf. This is not so. We possess specimens from Amboyna which I have compared with the type in the Felder collection. On the upperside *N. perusia* is much like *N. atrata*, but on the underside is quite different, the white lines, excepting those at the bases, are further apart, and have the ground-spaces between them white, bordered on each side by a brown line.

kata, de Nicéville[1], but on the underside is quite different and appears to belong to another group. I have not seen *L. marakata*, and can only judge from the description. Mr. Cator captured *L. daones* in December.

LAMPIDES OSIAS, Röber.

Banguey I., N. Borneo (*Waterstr.*).

L. osias certainly occurs in Sumatra, although it is not given by Mr. de Nicéville and Dr. Martin in their list. We possess specimens from the N.E. It is closely allied to *L. suidas*, Feld., of which I have examined the type, but is a paler shade of blue on the upperside, and the white markings of the underside show through more than usual, especially on the hind wing. On the underside the lines of *L. suidas* are broader and straighter.

From some remarks made by Mr. de Nicéville in the Journ. Bomb. Nat. Hist. Soc. vol. x. p. 38 (1895), it is evident that he has not seen the type of *L. cleodus*, Feld., as he writes of it as "azure-blue." It is paler than *L. celeno*, Cr., in fact almost white, shining, and with a slight greenish tinge; and, from some remarks further on, on the same page, I do not feel certain that he has identified *L. osias* correctly.

We possess many specimens of *L. osias*, one of which was identified by Herr Röber.

LAMPIDES LIVIDUS, H. H. Druce.

Kina Balu (*Waterstr.*).

Dr. Staudinger has received a single male specimen of this species, which agrees well with the type from Labuan, but is slightly stronger in colour on both surfaces.

THYSONOTIS, Hübn.

THYSONOTIS SCHAEFFERA, Esch.

We have lately received specimens of this species captured at Sandakan.

ARHOPALA, Boisd.

Mr. G. T. Bethune-Baker, who has been working at this genus for some three years, has prepared the following additional list of Bornean species, and has sent me descriptions of those which he considers to be new, whilst I have added new localities to some few species which I have previously referred to. Mr. Bethune-Baker is entirely responsible for all the new species of this genus here described.—*H. H. D.*

Through the kindness of Mr. H. H. Druce I have recently been enabled to examine several specimens of the genus *Arhopala* which are evidently new, and these, together with a number of others now in my possession, kindly lent me by Dr. Staudinger and Herr Georg Semper, show that there is plenty of work yet to be

[1] *L. marakata*, de Nicév. Butt. Ind. etc. p. 174, footnote (1890).

done in the island of Borneo, for out of quite a small number of the genus there are twelve new species, most of which are strongly marked forms. As I am gradually preparing a monograph of the genus, it will be unnecessary for me now to do more than enumerate and describe the species.—*G. T. B.-B.*

ARHOPALA MEANDER, Boisd. Voy. Astr., Lép. p. 76 (1832).

One very magnificently marked (underside) specimen from the collection of Herr Ribbe from South-east Borneo.

ARHOPALA TAMEANGA, sp. n., Bethune-Baker. (Plate XXIX. figs. 7 ♂, 8 ♀.)

Tameang-Lajang (S.E. Borneo).

Expanse, ♂ 57, ♀ 54 millim.

♂. Upperside: both wings dark bluish purple, in some lights almost indigo colour, and having a brownish patch in a certain light, with an almost linear black costa and outer margin to the primaries, and on the secondaries a broad brown costa and very fine black outer margin; abdominal fold grey; submedian area very densely clothed with brown hairs; tail black, tipped with white, lobe scarcely developed at all. Underside: both wings very warm ochreous brown, with darker spots margined with creamy. Primaries with three very dark, large, slightly increasing cell-spots, below the third being another equally dark rather large spot, over the third a small spot near the costa; subdiscal area dark brown, with a slightly purplish tinge; submedian area pale; transverse branch composed of six oval spots, the first four outwardly oblique, each spot projecting beyond its predecessor, especially the fourth; fifth and sixth spots shifted well inwards and below each other; submarginal band indefinite, but fairly distinct. Secondaries rather darker than primaries, with a dark spot at the basal costal extremity, three dark basal spots below each other, and a fourth shifted right beyond the internal nervure; these are followed by three more spots below each other, the third being very large and irregular; cell closed by a largish spot, below it being another connecting it with the lower of the three spots; transverse band consisting of eight spots, the second being large and shifted outwards on to its outer margin, the third shifted right out, detached, fourth further out, fifth inwards, sixth outwards; seventh angular spot well inwards (not detached), almost broken into two at the angle, and confluent with the long eighth spot; submarginal row very indistinct; anal spot black, with a very plentiful scaling of bright pale greenish metallic scales, with one edged above by a dark line to the internal nervure; this line has some metallic scales therein.

♀. Upperside: both wings pale bluish violet; primaries with broad brown costa, broader outer margin, and very broad apical area, cell closed by a darkish spot; secondaries with very broad margins all round, especially the costa. Underside precisely as in the male, but rather paler, and with the submarginal bands rather

more distinct, whilst the second and third spots of the transverse band of the secondaries are not dislocated.

This is a well-marked species, and will follow *A. agnis*, Feld. A male and female, e mus. Herr G. Semper.

ARHOPALA SEMPERI, sp. n., Bethune-Baker. (Plate XXIX. figs. 9 ♂, 10 ♀.)

♂, Tameang-Lajang (S.E. Borneo); ♀, Kina Balu.

Expanse, ♂ 54, ♀ 50 millim.

♂. Upperside: both wings dull violet; primaries with costa blackish, of medium width, and posterior margin rather broader; cell closed by a distinct, black, curved, narrow spot, and nervures intersecting the surface with black. Secondaries with broad brown costa, rather narrow posterior margin, increasing broadly at the anal angle; abdominal fold grey; nervures darkly intersecting the surface. Tail longish, black, tipped with white; the closing of the cell is slightly darkened. Underside: wings ochreous brown, with darker spots encircled with whitish. Primaries with three large increasing cell-spots, the third vein very irregular and large; below this is another large spot in the lower median angle, above it is a trace of a minute spot on the costa; subdiscal area slightly darker, edged very distinctly with whitish, whilst below the second cell-spot is a light V-shaped mark in this area; transverse band composed of six longish spots, the upper four being distinct ovals, a small one near the costa; the second shifted right outwards, the third a little further out, but, on account of its larger size, its inner margin is shifted inwards also; fourth shifted outwards again, fifth and sixth spot below each other and shifted well inwards; below these is a trace of a small spot below the lower median nervule; submarginal row indefinite and indistinct. Secondaries with a fair-sized spot at the basal extremity of the costa, and four longish basal spots below each other, the upper three being very close together, the fourth shifted right inwards and being in line (horizontally) with the third; following these are three large spots below each other; cell closed by a large irregular spot, below which is a larger spot than usual occupying the lower median angle; transverse band composed of eight spots in pairs; the lower of the first pair is shifted outwards, the second pair is shifted right out and detached, the lower of these two being further out than the upper; the third pair well inwards, the lower of these two being shifted slightly outwards; seventh angular spot shifted right inwards and confluent with the eighth spot, which is unusually long, extending close up to the fourth basal spot; submarginal band distinct, sublunar; lobe-spot black, edged above with blue metallic scales, a black spot on each side the tail, with superimposed blue metallic scales, which are more plentiful on the inner spot.

♀. Upperside: both wings violet; primaries with broad brown costa, broader posterior margin, and very broad apical area; secondaries with broad brown margins all round, diminishing slightly in the anal area. Underside like the male, but paler and

less distinctly spotted, and the transverse band has a longish spot below the lower median nervule; the secondaries are likewise less darkly spotted, especially the transverse band, which is continuous without a break, and with spots more quadrangular.

This is a very distinct species and will come after *A. tameanga*.

♂ e mus. Semper; ♀ e mus. Staudinger.

Arhopala dajagaka (Stgr. MS.), sp. n., Bethune-Baker. (Plate XXIX. figs. 11 ♂, 12 ♀.)

Kina Balu, Labuan, Tameang-Lajang.

Expanse, ♂ ♀, 55 to 56 millim.

♂. Upperside: both wings bluish purple, with a very slight brown tinge in side lights. Primaries with costa and outer margin finely black. Secondaries with broad brown costa and narrow black outer margin; abdominal fold grey; no tail, but a slight tooth-like projection at the end of the lower median nervule; no lobe. Underside brown with an ochreous tinge, with dark spots palely encircled. Primaries with three increasing cell-spots, below the first and second a large spot, sometimes divided into two, below the third a spot in the lower median angle; transverse catenulated band composed of six spots—the first, on the costa, small; second, third, and fourth shifted well outwards and outwardly oblique; fifth and sixth below each other, shifted inwards but outwardly oblique; submarginal row indefinite; submedian area paler. Secondaries with a spot at the extreme costal basal extremity; four basal spots of fair size below each other, the second shifted slightly inwards, the fourth right inwards, followed by three more spots below each other; cell closed by a large subovate spot, below which is a smaller one connecting it with the lower of the previous three; catenulated band composed of eight spots, all of which (except the eighth) are completely encircled by a pale margin and are arranged in a fairly even semicircle; the first and second are detached from each other and from the others, all of which touch each other (in one specimen before me I notice the third and fourth spots are not quite completely encircled with a pale margin); submarginal row rather indefinite; anal spot black; a dark spot on each side the lower median nervule, over which are superimposed bright pale blue metallic scales, as also over the anal spot; this scaling is rather plentiful.

♀. Upperside: both wings bright violet. Primaries with a dark patch beyond the apex of the cell; costa not very broadly brown; outer margin with deep scollops of brown between the nervules, apex broadly brown. Secondaries: costa broadly brown, outer margin with brown border of medium width; abdominal fold greyish. Underside as in the male, but paler; but the catenulated band of the primaries has an additional spot below the lower median nervule, and the same band in the secondaries has not the spots so completely palely margined as in the male.

This species will precede *A. anamuta*, Semper.

Mus. Staudinger, Semper, G. T. B.-B.

ARHOPALA DRUCEI, sp. n., Bethune-Baker. (Plate XXX. figs. 1 ♂, 2 ♀.)

Kina Balu.

Expanse, ♂ 55, ♀ 50 millim.

♂. Upperside: both wings purple, quite dull or somewhat bright according to light; costa and outer margin of primaries narrowly brown; costa of secondaries broadly, outer margin narrowly, brown; tail long, tipped with white, lobe fairly distinct, abdominal margin grey. Underside: both wings ochreous brown, with darker spots palely margined, those before the transverse lines being the darkest. Primaries with three good-sized increasing cell-spots, above and below the third is another spot; subdiscoidal area dark, with an indefinite pale lunular mark in the upper part at the centre; transverse catenulated band composed of six confluent spots, below which is a double spot like the figure 8; the upper four spots are slightly curved outwards, the fifth and sixth have their inner margins shifted well inwards, but the outer margins very slightly so, and these two spots have an outward inclination; submarginal row indefinite but fairly distinct; submedian area paler. Secondaries with a small spot at the basal upper extremity; four basal spots below each other, second shifted slightly inwards, fourth well inwards outside the internal nervure; beyond these are three larger spots below each other; cell closed by a long subquadrate spot, below which is a small spot in the lower median angle; transverse band beginning below the upper discoidal nervule, composed of six laterally-edged spots, the second shifted outwards, third inwards, fourth inclined outwards, fifth angular spot right inwards; sixth long spot very irregular in shape, slightly outwards, but extending up to the internal nervure; just above and between the uppermost spot of this series and that closing the cell are two confluent spots occupying the interspaces between the costal, subcostal, and upper discoidal nervures, the lower of which is the longer of the two; submarginal row indefinite but fairly distinct; anal area occupied by bluish metallic scales over a blackish patch; tail brown, tipped with white; lobe-spot velvety black, edged above with metallic blue.

♀. Upperside: both wings bluish purple, not nearly so deep as in the male, with broad margins all round, the apical area being the broadest. Underside: both wings rather darker than in the male; in the primaries the transverse band has no 8-shaped double spot, but ceases on the lower median nervule. In the secondaries the transverse band just touches the lower of the two spots on the costa, and the three upper spots of the transversal series are nearly (not absolutely) confluent, whilst the fifth and sixth are confluent.

In spite of these little differences, the two insects look so precisely similar in general pattern and tone that I do not doubt their being sexes of the same species, which will come next to *A. adatha*, Hew. There are a male and two females before me, all taken on Kina Balu, and kindly lent to us by Dr. Standinger.

ARHOPALA VIHARA.

Arhopala vihara, Feld. Wien. ent. Mon. iv. p. 395 (1860); Reise Nov. Lep. ii. p. 228, t. 29. fig. 7 (1865).

Labuan and Tameang-Lajang.

Two typical specimens, e mus. Dr. Staudinger and Herr Semper.

ARHOPALA PSEUDOMUTA, Stgr. Iris, ii. p. 125.

Hab. Malacca; Borneo.

Expanse, ♂ 46, ♀ 47 millim.

♂. Upperside: both wings rather dull violet; primaries with narrow brown costa, and less narrow, but still narrow, black outer margin; secondaries with broad brown costa and narrow outer margin; abdominal fold greyish; tail brown, longish, tipped with white. Underside: both wings warm ochreous brown, with darker spots palely encircled. Primaries with three increasing cell-spots, below the third another in the lower median angle; transverse catenulated band composed of six spots—the first three very oblique outwardly, the fourth inclined (not shifted) inwards so as to form a sharp curve with the lowest of the three, fifth shifted well inwards, sixth inclined outwards; submarginal row rather indefinite; submedian area paler, subdiscal area darker. Secondaries with a small spot at the basal costal extremity; four basal spots, the third shifted slightly outwards, the fourth well inwards, followed by three larger spots below each other; cell closed by a subquadrate spot, below which is a small one touching the lowest of the three; catenulated band composed of eight spots—the second shifted outwards and detatched from the first and the third, third and fourth shifted right outwards, fifth well inwards, sixth outwards, seventh right inwards and detached, confluent with the long eighth spot; submarginal row sublunular and well defined; anal spot velvety black, preceded by two black spots, which are almost covered over with pale blue metallic scales; the anal spot is also edged above by the same coloured scales.

♀. Upperside: both wings pale violet; primaries with rather broad costa, very broad apical area, and broad outer margins, all brown; secondaries with broad brown costa, narrow brown outer margin, increasing slightly towards the anal angle. Underside similar to the male, but much paler, and in the secondaries the fourth spot of the catenulated band is projected more outwards.

A male from North Borneo is decidedly bluer than those from Malacca, and the outer margin of the secondaries is rather wider.

I have thought it well to fully describe this species, as Staudinger's description (Iris, ii. pp. 125 & 126) is almost purely comparative. —*G. T. B.-B.*

ARHOPALA KOUNGA, sp. n., Bethune-Baker. (Plate XXX. figs. 3 ♂, 4 ♀.)

Kina Balu.

Expanse, ♂ 41, ♀ 37 millim.

♂. Upperside: both wings bright rather deep blue tinged with purplish, with a slight brownish lustre in one light; costa and outer margin of primaries very finely black, almost linear; costa of secondaries broadly, outer margin very finely black; abdominal fold greyish; tail fairly long, black tipped with white, lobe slightly developed, with small white spot on its interior and exterior margin. Underside: both wings olivaceous brown, with darker spots palely margined. Primaries a little paler than secondaries, with three increasing cell-spots, above and below the third being another spot; transverse maculate band composed of six spots, the upper four slightly curved outwards and uninterrupted, the fifth shifted slightly inwards, sixth outwards and terminating on the lower median nervule; below this in the pale submedian area is a trace of another small indefinite detached spot; submarginal row rather indefinite and indistinct, subdiscal area dark. Secondaries with four basal spots below each other, the third shifted outwards; following these three larger ones below each other, the third one being again shifted outwards; cell closed by a large subquadrate spot, below which is a smaller triangular one connecting it with the lower of the three spots, whilst above it, touching its outer apex, are two spots over each other, the lower of which is the larger, having its outer margin shifted outwards, the upper one touches the costal nervure; the transverse maculate band commencing on the upper discoidal nervule consists of six spots—the first three almost confluent, but each curved very slightly beyond its predecessor, fourth shifted outwards, fifth angular spot right inwards and just detached, sixth long irregular spot almost confluent with it; submarginal row fairly distinct, sublunular; a black spot on the lobe and on the margin on each side of the tail; anal area covered with bright pale blue metallic scales, over which is a pale dusting up to the inner margin; tail brown, tipped with white.

♀. Upperside: both wings slightly bluer than the male; primaries with broadish costa, broad outer margin, and broader apex of black; cell closed with a very distinct black spot, and the apex of the blue area beyond the cell has three deep black spots in the nervule interspaces: secondaries with broad costa, less broad outer margin of black; abdominal fold greyish; tail black, tipped with white. Underside very much greyer than in the male, and in the secondaries the transverse maculate band just touches the outer lower margin of the two costal spots, and the fourth spot is shifted less outwards.

This species is nearest to *A. aroa*, Hew., but that insect is much more purple on the upperside, and the arrangement of the three upper spots of the transverse band of the secondaries is different, and in the very large series of *A. aroa* now before me I find they follow the same pattern throughout. The female of *A. kounga* is quite different as to upperside and colour of underside, as already described.

Types, e mus. Staudinger.

Arhopala bella, sp. n., Bethune-Baker. (Plate XXX. figs. 6 ♂, 7 ♀.)

Kina Balu.

Expanse, ♂ 55, ♀ 48 millim.

♂. Upperside: both wings brilliant lustrous purple around the margins, the whole of the inner area being lustrous brown, shading in certain lights into dull rather shining deep violet, somewhat as is seen in violet-coloured specimens of *A. allata*, Stgr., but much more beautiful. The secondaries show much more of the brilliant purple than the primaries and they have the abdominal fold brownish grey. In the single specimen before me there is a trace of a tail broken off, but it appears to have been a fine one. Extreme margins with a very fine lineal black line. Underside: both wings brown, slightly tinged with lilac, with dark spots laterally edged with very pale lilac. Primaries with three large cell-spots, the outer two very large, below the third in the lower median angle is another largish spot, whilst over the third are two very small spots, the lower one being shifted inwards; transverse band composed of six spots, the upper four shifted very oblique each beyond its predecessor, fifth spot shifted well inwards; sixth spot, the largest, ending on the lower median nervule and shifted outwards; a trace of the submarginal row; subdiscoidal area dark, submedian area rather paler. Secondaries with a spot at the extreme basal apex, four basal spots below each other, followed by three large ones; cell closed by a large subquadrangular spot, below which is a small triangular one connecting it with the lower of the three spots just mentioned, this spot being very irregular in shape; above the spot closing the cell and touching it, but shifted outwards, are two spots over each other, reaching the costal nervure, whose inner margins are confluent, but the outer margin of the lower and larger spot is shifted outwards; the transverse macular band begins below the upper discoidal nervure and is composed of six spots—the first one shifted right out, with its upper inner angle just touching the lower and outer extremity of the lower of the two spots above, second spot shifted outwards, third inwards, fourth outwards, fifth angular spot inwards, sixth long spot slightly inwards again; a trace of a submarginal subtunular row; anal area with bluish-green lustrous metallic scales; lobe-spot black; lobe scarcely developed at all.

♀. Upperside: both wings lustrous azure, in certain lights rather dull violet. Primaries with costa somewhat narrowly and outer margin broadly dark brown; the apex of the cell has a short black line at its upper extremity, showing rather plainly in the blue area. Secondaries with all the margins broadly brown; tail fairly long, brown tipped with white. Underside precisely as in the male, but tinged more with pinkish violet than lilac.

This very beautiful and (in the male) very unusual-looking species will probably come near to *A. acestes*, de N., but may at once be recognized by its large size, its brilliant purple margins, and its lustrous brown inner areas; the macular transverse bands are also

somewhat different, and *A. acestes* is much more spotted in appearance beneath than *A. bella*. I have a fine pair of this species before me, both taken on Kina Balu, from Dr. Staudinger's collection.

ARHOPALA HAVILANDI, sp. n., Bethune-Baker. (Plate XXX. figs. 8 ♂, 9 ♀.)

Kina Balu.

Expanse, ♂ ♀, 47–48 millim.

♂. Upperside: both wings brilliant deep purplish blue, in some lights looking dull purplish, whilst with a side light there is quite a brownish lustre over the one side; costa and outer margin of primaries very finely black; secondaries with costa broadly and narrowly black; tail fine, black tipped with white; abdominal fold greyish. Underside: both wings cinnamon-brown, with a pinkish-violet tinge, with darker brown spots very palely margined. Primaries with three good-sized increasing cell-spots—a very small spot being over the second and third close to the costa, and another between and almost touching them (*i. e.* the cell-spots), this spot varies much in size; below the third is a good-sized spot occupying the lower median angle; subdiscoidal cell dark, submedian area paler: the transverse band is composed of seven spots, the upper four being outwardly oblique, the second being shifted well beyond the small first one, the third very slightly inwards, the fourth right outwards, the fifth and sixth almost confluent, shifted well inwards but outwardly inclined, and below this is a smaller eighth spot, which is sometimes indistinct; submarginal row indistinct, sublunular. Secondaries with a small spot at the extreme basal angle of the costa, four basal spots below each other, the second and fourth shifted inwards, followed by three larger ones below each other; cell closed by a large spot laterally edged; transverse band beginning below the upper discoidal nervule and composed of six spots—the second shifted outwards, third inwards, fourth outwards, fifth angular spot quite detached and shifted far inwards and confluent with the long bottle-necked sixth spot; touching the outer margin of the spot closing the cell and the inner margin of the first spot of the transverse band are two spots confluent over each other, the upper one reaching the costa and the lower one as described but with its inner margin shifted right inwards, and being therefore the larger of the two; the submarginal row is sublunular and indistinct; anal area black, with bright bluish superimposed metallic scales; lobe-spot small, black; lobe scarcely developed at all.

♀. Upperside: both wings brilliant, lustrous azure-blue, dull violet in some lights and with the peculiar brown lustre in others. Primaries with somewhat narrow costa, broad outer margin, and very broad dark brown apical area; at the margin of the blue patch beyond the upper apex of the cell are three or four deep black spots in the interspaces of the nervules. Secondaries with all the margins broadly dark brown; the outer margin being less broad

than the others; tail fine, brown tipped with white. Underside precisely as the male, but a little duller in colour.

I have two males and two females before me, all from Kina Balu; they are nearest to *A. aida*, de Nicév., but can at once be recognized by their much larger size and very different upperside—the black margins being linear and blue, quite different in colour. I have two specimens of *A. aida* before me from Labuan, which are about half as small again as my species.

Arhopala aida, de Nicév. Journ. Bombay Nat. Hist. Soc. vol. iv. p. 168, pl. A. fig. 1 (1889).

Two specimens from Labuan—a male like the type, and a female small and violet-coloured.

Arhopala diardi, Hew. Cat. Lycænid. B. M. p. 9, figs. 51, 52 (1862).

Two ordinary specimens from Labuan and S.E. Borneo, from the collections of Dr. Staudinger and Herr Ribbe respectively.

Arhopala morphina, Dist.

Panchala morphina, Distant, Ann. Mag. Nat. Hist. ser. 5, vol. xiv. p. 201 (1884).

One specimen of this lovely insect, taken at Labuan, from Dr. Staudinger's collection.

Arhopala borneensis, sp. n., Bethune-Baker. (Plate XXX. fig. 5, ♂.)

Borneo (Kina Balu, Tameang-Lajang); Malacca.

Expanse, ♂ 42 to 46 millim.

♂. Upperside: both wings brilliant lustrous green, not so brassy as *A. aurea*, Hew., having in a side light a bluish tinge, with linear brown costa and outer margin to the primaries: secondaries with the green only occupying the central part of the wing, the rest of the wing being brown, this colour invading the outer margin of the green area, so as to make it irregularly hollowed; the tail at the end of the lower median nervule is short. Underside: both wings dirty dull brown, all the markings being most indistinct, the pattern being slightly darker, with very faint pale edgings. Primaries with a trace of three increasing cell-spots, followed by an equally indistinct transverse band composed of five spots, the upper three being outwardly strongly oblique, the lower two inwardly oblique; there is a trace of a spot below that closing the cell; subdiscal area dark; submedian area pale. Secondaries with spots rather more distinct, four basal below each other, followed by three larger ones below each other; cell closed by a largish spot, below which is a small one in the lower median angle, and above it, almost confluent but shifted very slightly outwards, are two spots above each other, the upper smaller one reaching to the costa: transverse band less distinct, composed of six spots from the upper discoidal nervure; the third

is shifted slightly inwards, fourth outwards, fifth angular spot inwards and confluent with the eighth spot; submarginal row very indistinct; two or three dark spots at the anal area superimposed by unusually blue submetallic scales.

This species will come between *A. trogon*, Dist., and *A. aurea*, Hew.; it is nearest to the latter in the underside colour, but to the former in the pattern. I have one specimen before me from S.E. Borneo in which the pattern is much more distinct than in the other two from Kina Balu and Malacca.

Arhopala labuana, sp. n., Bethune-Baker. (Plate XXX. figs. 12 ♂, 13 ♀.)

Labuan; Mindanao.

Expanse, ♂ 49, ♀ 44 millim.

♂. Upperside: both wings dark bluish purple, in some lights very dull violet, and with a side light having that lustrous brown gloss which appears not uncommon in the Bornean *Arhopalæ*; primaries with narrow black costa and rather broader outer margin; secondaries with broad brown costa and narrow blackish scolloped outer margins; abdominal fold greyish. The lower median nervule is produced into a longish tooth-like projection; but after having carefully examined it, I do not think it has ever been a tail. Underside: both wings greyish ochreous brown, with distinct dark spots and fascia edged with cream-colour. Primaries with three increasing cell-spots, below the third are two spots in the nervule interspaces, that touching the third spot being exceedingly small; transverse maculate band composed of six subovate spots, that on the costa being very small, the upper four are arched slightly outwards, the fifth inclined slightly inwards, and the sixth, ending on the lower submedian nervule, inclined outwards; submarginal row indefinite, but distinct; submedian area greyish; subdiscal dark, with a pale linear edging. Secondaries with four fair-sized spots below each other, the third shifted slightly outwards, beyond these are four larger spots similarly arranged; cell closed by a large subquadrate spot, below which are two other spots in the nervule interspaces, the upper of these being minute and discernible by its pale outer margin, the lower touches the third spot of the second row of four: transverse maculate band composed of seven spots—a pair (one above the other) on the costa, the lower one being the larger, which touches the spot closing the cell; the third spot is shifted right outwards, its inner margin just touching the outer margin of the second spot; fourth spot shifted very slightly outwards but inwardly oblique; fifth spot well inwards, sixth well outwards; seventh angular spot well inwards and terminating just beyond the submedian nervure; submarginal crescentic row distinct, with its inner pale margin distinct from the costa to the internal nervure; three black spots at the anal area, with pale blue metallic scales over them, these having a sharp lunular black interior edging, which follows the line of the pale inner margin of the submarginal row.

♀. Upperside: both wings bright violet-blue; primaries with a dark spot at the end of the cell and exceedingly broad brown margins all round; costa brown to the cell, and almost to the upper median nervule; secondaries with exceedingly broad costa and very broad outer and abdominal margins. Underside exactly like the male, but darker in colour.

This species will precede *A. arsenius*, Feld.

Arhopala waterstradti, sp. n., Bethune-Baker. (Plate XXX. figs. 10 ♂, 11 ♀.)

Kina Balu.

Expanse, ♂ 42, ♀ 40 millim.

♂. Upperside: both wings lustrous bright blue tinged with violet, in some lights the colour being dark violet-blue; primaries with costa narrowly, and outer margin less narrowly black; secondaries with costa less broadly than usual, and outer margin very narrowly black. Underside brown, with slightly darker spots palely edged. Primaries with pattern rather indistinct, with three increasing cell-spots, the first near the base, below the second is an indistinct and indefinite spot, and below the third is a small indistinct one: transverse catenulated band composed of six spots, ending on the lower median nervule; the upper four are each inclined obliquely outwards, but not fractured; the fifth is shifted inwards very slightly as to its outer, but more so as to its inner margin; the fifth is shifted outwards; submarginal band very indistinct; submedian area paler. Secondaries with pattern more distinct than in primaries; four basal spots below each other, the third shifted outwards, followed by three larger spots below each other; cell closed by a subquadrate spot, below which is a small spot in the lower median angle: transverse catenulated band composed of eight spots from the costal nervure; the second largish, shifted well outwards and slightly dislocated from the third, which is shifted right outwards; fourth shifted outwards again; fifth inwards, and having a very oval exterior margin; sixth outwards, with a straight margin; seventh angular spot dislocated right inwards, eighth slightly inwards; submarginal row fairly distinct; anal area darker, with superimposed pale bluish-green metallic scales.

♀. Upperside: both wings bright lustrous azure; primaries with rather broad costa and very broad black outer margins; secondaries with broad even black margins all round; abdominal fold greyish. Underside just like the male, with two exceptions, viz., that there is a trace of a spot on the costa over the third cell-spot in the primaries, and in the secondaries the second and third spots of the transverse band are not dislocated. All the other markings are exactly the same in every particular.

This species will follow *A. metamuta*, Hew., but it can easily be distinguished by both wings being the same colour.

Types, e mus. Staudinger.

Arhopala moorei, sp. n., Bethune-Baker. (Plate XXXI. fig. 1 ♂.)

Labuan; Kina Balu; Malacca.

♂. Upperside: both wings bright purplish blue, rather deep in tone; primaries with very narrow black costa and broad black outer margins; secondaries with broad black borders of almost equal width all round; abdominal fold dark grey; no tail. Underside: both wings dirty brown, with very slightly darker spots palely edged. Primaries with all the markings very obscure; three increasing cell-spots, the third the most obscure, with a trace of a small one below: transverse catenulated band composed of five spots, the first on the discoidal nervure, the upper three are very oblique outwardly, the fourth is shifted decidedly inwards, and the fifth outwards; submarginal row exceedingly indistinct; submedian area pale. Secondaries with pattern distinct; four basal spots, the second and fourth shifted inwards, followed by three larger spots below each other, the two lower ones being near together; cell closed by a large spot, below which is another small one: transverse catenulated band composed of eight spots, the upper two distinct from the others but not disconnected, the second spot is shifted well outwards, the third right out again, the fourth rather further out still, fifth inwards, small, sixth outwards; seventh angular spot right inwards (sometimes dislocated), eighth almost confluent with it; submarginal band indefinite; anal area with two dark spots, over which are imposed bluish or bluish-green metallic scales.

♀. Upperside: both wings of paler blue than the male, with short broad black costa, very broad outer margin, and excessively broad apical area; secondaries with very broad black borders all round, the costa being the broadest. Underside precisely as the male in every respect.

This species, with *A. waterstradti*, will come between *A. metamuta*, Hew., and *A. hypomuta*, Hew. It can readily be distinguished from the former in that the colour of both the wings is the same without the purple gloss, and darker altogether than the colour of the hind wings of that species; the borders are also narrower than in *A. metamuta*; whilst the bluer colour and the broad borders separate it from *A. hypomuta*. From *A. waterstradti* it differs in being a smaller insect with broader borders and of a deeper and more purple-blue. I have two specimens, kindly lent me by Herr Ribbe, from Malacca, which, though larger than Bornean specimens, yet cannot be referred to anything but this insect.

Mus. Staudinger, Ribbe, G. T. B.-B.

[We also possess two males of this species from Sumatra.—*H. H. D.*]

Arhopala deva, sp. n., Bethune-Baker. (Plate XXX. fig. 3, ♂.)

N. Borneo, Sandakan.

Expanse, ♂ 40, ♀ 40 millim.

♂. Upperside: both wings purple, with black linear costa and

very fine outer margin in the primaries; in the secondaries the costa is broadly brown, the outer margin very narrowly black; abdominal fold dark grey; no tail. Underside: both wings dull ochreous brown, with spots slightly darker, palely edged. Primaries with three small increasing cell-spots, below the third a small spot, and a trace of a spot above on the costa: transverse maculate band composed of five distinct spots, beginning below the third subcostal nervule; the second spot is shifted inwards and the third outwards, these first three all being outwardly oblique; fourth spot shifted well inwards and being almost dislocated; fifth spot inclined outwards and ending above the lower median nervule; submarginal row indistinct and indefinite; submedian and subdiscal area greyish. Secondaries with pattern rather plainer than in the primaries; four basal spots below each other, the third shifted outwards, followed by three somewhat larger spots below each other; cell closed by a subovate spot, below which is a small triangular one: transverse maculate band composed of eight spots, the first six being distinct spots, the second shifted outwards, third outwards, fourth outwards again, fifth well inwards, sixth outwards, seventh angular spot dislocated right inwards, eighth long spot almost confluent with this; submarginal row more distinct than in primaries; lobe-spot black, and a trace of a black spot in each of the next two nervule interspaces, over which are imposed bright greenish-blue scales.

♀. Upperside: both wings brown, slightly tinged with purple; primaries with a patch of violet over the cell, the subdiscal area, and half of the median area; secondaries with the violet almost confined to the cell. Underside exactly like the male, but with the pattern slightly more distinct.

This is nearest to *A. antimuta*, Feld. (*davisoni*, de Nicév.), but is a larger insect and purpler in colour, whilst beneath the colour is different and the transverse maculate bands are differently arranged, as described. In the female the violet patch is of quite a different colour and occupies less space in the primaries, and in the secondaries there is not a quarter so much as in *A. antimuta*. Its correct position will be between *A. hypomuta*, Hew., and *A. antimuta*, Feld.

A male from N. Borneo (*H. G. Smith*); female from Sandakan (*G. J. B.-B.*).

Female also in Mus. Druce, from Sandakan.

Arhopala elopura, H. H. Druce. (Plate XXIX. fig. 6, ♂.)

I have figured the type male. [We have recently received a male from Sandakan.—*H. H. D.*]

Arhopala sandakani, n. sp. (Plate XXXI. fig. 2, ♂.)

Sandakan; Java.

Expanse, ♂ 35–45, ♀ 42 millim.

♂. Upperside: both wings bright bluish purple, rather dull in

some lights, with a very narrow black costa and broader outer margin to the primaries; secondaries with a very broad costa and much narrower outer margins; tail black with white tips; anal angle with a small whitish spot. Underside: both wings ochreous, with darker spots margined with cream-colour. Primaries with the usual three increasing cell-spots; above and below the third is another spot, that on the costa being quite small; subdiscal area dark: transverse band composed of six or seven spots, the second one larger than that on the costa and shifted outwards, third very slightly outwards but inclined decidedly inwards, fourth both shifted and inclined outwards, fifth perpendicularly inclined with inner margin shifted inwards, sixth shifted well outwards; a trace of a small spot below this; submarginal row fairly distinct; submedian area pale. Secondaries with a small spot at the costal basal extremity; four basal spots, second and fourth shifted inwards, followed by three larger spots below each other, the second of which is shifted inwards; cell closed by a subquadrate spot, below which is another connecting it with the lowest of the three spots: transverse band composed of seven spots, the upper two being detached from the others and just touching the cell-spot, the third spot is shifted right outwards, fourth outwards again, fifth with its inner margin only shifted inwards, sixth well outwards, seventh angular, and eighth spot confluent, being joined by a narrow neck and extending to nearly halfway up the internal nervure; submarginal row distinct, subannular; a black spot on the very ill-developed lobe and just beyond the tail, the intervening area filled with metallic green scales, which also edge the spots above.

♀. Upperside: both wings purplish blue, with a black spot at the end of the cell in the primaries, the costa being broadly blackish, the outer margin broader, and the apical area still broader. Secondaries with very broad margins all round, the costa being the broadest, and the outer margin slightly decreasing in width near the tail. Underside as in the male.

This species will come near to *A. vihari*, Feld. I have before me three males—one from Java, in which the spots are very dark indeed; but in none of these, though evidently the same species, is the transverse band of the primaries precisely similar: in that from Java the upper four spots are strongly but evenly outwardly oblique; whilst in a very small specimen from Sandakan the first five make an almost even curve, and in one wing of the male type there is a minute spot almost touching the inner upper corner of that closing the cell.

E mus. Druce (Sandakan, 2 ♂, 1 ♀). ♂, Java, e mus. Staudinger.

ARHOPALA CENTAURUS, Fabr.

Kina Balu (*Waterstr.*).

Dr. Staudinger has received a single female specimen of the form *pseudocentaurus*, D. & Hew.

Arhopala apidanus, Cr.

Banguey I., N. Borneo (*Waterstr.*).
Waterstradt has also sent this species from the Island of Balabac.

Arhopala farquhari, Distant.

Kina Balu (*Waterstr.*).

Acesina, Moore.

Dr. Staudinger has sent me a single specimen of this genus from Kina Balu, which is in poor condition, and which I am unable to refer to any named species with certainty. On the upperside it is much like the figure given by Mr. Elwes of *A. ariel*, Doherty[1], in P. Z. S. 1892, pl. xliv. fig. 9, but on the underside appears quite different.

Curetis, Hübn.

Curetis tagalica, Feld.

Banguey I. (*Waterstr.*).
The specimen obtained from this island is more like the typical specimens than those from the mainland.

Curetis æsopus, Fab.

Labuan (*Wahnes*); Sarawak (*Platen*).
I have received specimens of this form in which the basal brown area on the hind wing has entirely disappeared.

Curetis insularis, Horsf.

Phædra insularis, Horsf. Cat. Lep. E. I. C. p. 125 (1829).
Kina Balu (*Waterstr.*).
Dr. Staudinger has sent a male which agrees exactly with Javan specimens in our collection.
C. insularis appears to be a smaller and slighter built insect than its congeners.

Pratapa, Moore.

Pratapa calculis, H. H. Druce.

Possibly this is the same as *Camena cretheus*, de Nicév. Journ. Bomb. Nat. Hist. Soc. vol. ix. p. 294, pl. P. fig. 35 (1895), but the linear band on the fore wing below appears much more bent outwards than in *P. calculis*; but there appear to be no other differences.

Tajuria, Moore.

Tajuria jalindra, Horsf.

Waterstradt has obtained both sexes of this insect from Kina Balu, and I find that the blue area of the typical Javan form of female is replaced by a smaller white area crossed by brown veins,

[1] *A. ariel*, Doh. J. A. S. B. lx. pt. 2, p. 33 (1891).

much as in *T. indra*, Moore, but has a much larger white area than any females we possess from Continental India.

TAJURIA DOMINUS, H. H. Druce.

This may be the male of *T. iscæus*, Hew., Hewitson's male *T. iscæus* being in fact *Britomartis cleoboides*, Elwes, as pointed out by Mr. de Nicéville in the Journ. Bomb. Nat. Hist. Soc. vol. ix. p. 307. Dr. Staudinger has sent me a male from Malacca which is very close to *T. dominus*, but has a greener shade of blue on the upper-side and the orange at the anal angle below is more yellow. I have also received a female *T. dominus* from Kina Balu, and note that the blue on the upper surface is more shining and that the outer margin of the fore wing is certainly more convex than in the female from Malacca. If Mr. Distant's type male of *T. relata* should prove to be a female, then most probably the male referred to above from Malacca is the male *relata*; but for the present I do not think it is advisable to sink *T. dominus*.

I, however, fail to see how Mr. de Nicéville can form the conclusion, from the possession of a female *T. relata* from Perak that agrees exactly with Hewitson's fig. 14, pl. xix., that "Hewitson was correct in the first instance in calling his original type a male" (*vide* J. B. N. H. S. vol. ix. p. 308).

Mr. de Nicéville has described the genus *Britomartis* as having only two subcostal nervules to the fore wing, and his *B. buto* is also described as having but two; in the figure given of this species (J. B. N. H. S. vol. ix. pl. P. fig. 41), three subcostal nervules are distinctly shown, doubtless in error.

Colonel Swinhoe has lately described *Tajuria valentia*[1], which, according to Mr. de Nicéville, is the same as *Britomartis cleoboides*, as that species is the *T. mantra* of the 'Butterflies of India, etc.'

TAJURIA BLANKA?

Tajuria blanka, de Nicév. J. A. S. B. vol. lxiii. p. 39, pl. iv. fig. 4, ♀ (1894).

Kina Balu (*Waterstr.*).

Dr. Staudinger has sent a fine female specimen which agrees well with Mr. de Nicéville's figure and with his description in all points, excepting as regards the thorax below, which he describes as drab; in the specimen before me it is white. Dr. Staudinger writes that it is certainly the female of *Pratapa lucidus*, mihi. The female of *P. cippus* is, I believe, unknown, so that we cannot judge by analogy; but, despite the different appearance of the underside, I think it is quite possible that Dr. Staudinger is right. Mr. de Nicéville and Dr. Martin record two specimens of *Camena cippus*, Fabr., from Sumatra, but there is no note as to their sex. Can these be specimens of my *P. lucidus*, which certainly occurs in Sumatra? If, as I suspect, these two specimens should turn

[1] *Tajuria valentia*, Swinh. Ann. Mag. Nat. Hist. ser. 6, vol. xvii. p. 358 (1896).

out to be *P. lucidus* and *Tajuria blanka* to be its female, the insect must stand under the latter name, unless *T. blanka* is the female of the true *P. cippus*. But, I think, before we can arrive at a correct conclusion, we must await the arrival of more specimens. I note that the thorax beneath, in all the specimens I have seen of *P. cippus* and *P. lucidus*, is white.

Tajuria donatana, de Nicév.

Kina Balu (*Waterstr.*); Banguey I. (*Waterstr.*).

The specimen obtained on Banguey I. has the blue rather duller and its areas rather reduced.

Tajuria berenis, sp. n. (Plate XXXI. fig. 6, ♂.)

♂. Upperside bright pale blue, colour of *Purlisa giyanteus*, Dist., paler on the disc of the fore wing: fore wing—costal margin black; apex broadly black, reaching to just below the lower median nervule, apparently blacker at the end of the cell; inner margin straight; cilia black, except at outer angle where it is greyish: hind wing—costal margin whitish, darker towards the apex, which is narrowly black; anal fold whitish; a black anteciliary line; cilia greyish; lobe with a black spot partially covered with blue scales and crowned with a small red spot. Underside grey, colour of *T. thyia*, de Nicév.[1], indistinct lines closing the cells in both wings as in that species; the ultra-median linear band much as in *T. thyia*, but much bowed outwards in the fore wing and straighter in the hind wing. The anal markings are arranged as in *T. thyia*, but the black spots are larger and the yellow areas darker in colour and more extensive; cilia grey. Head, thorax, and abdomen concolorous with wings on both surfaces. Two tails of about equal length, black, bordered and tipped with white.

Expanse $1\frac{4}{5}$ inch. Types Mus. Staud. & Druce.

Kina Balu (*Waterstr.*).

Dr. Standinger has received two males of this species which are identical. Although I have compared it with *T. thyia*, it is not by any means closely allied to it. The outer margin of the hind wing in *T. thyia* is much straighter, and the wing is much more produced anally than in *T. berenis*.

I thought at first sight that this species might come into Mr. de Nicéville's genus *Ops*[2], as it appears to have a darker black spot at the end of the cell, but on a closer examination I cannot detect that these scales present a different aspect to any others on the wing. I have not seen any species of *Ops* at present.

Below will be found described a beautiful new species of *Tajuria* from Java[3].

[1] *Tajuria thyia*, de Nicév. J. B. N. H. S. vol. vii. p. 336, pl. H. fig. 11 (1892).

[2] *Ops*, de Nicév. id. vol. ix. p. 296 (1895).

[3] Tajuria dacia, sp. n. (Plate XXXI. figs. 4 ♂, 5 ♀.)

♂. Upperside rich shining ultramarine blue: fore wing—costal and outer margins and apex broadly deep black, much as in *T. diæus*, Hew.; cilia black,

Suasa, de Nicév.

Suasa liris, Staud.

Suasa suessa, de Nicéville[1], described from the Malay Peninsula, appears to be a close ally of this species, if, indeed, it is distinct, but unfortunately I do not possess specimens for examination.

Chliaria, Moore.

Chliaria skapane, H. H. Druce.

I put this insect at first in the genus *Hypolycæna*, but on further examination I think it is better placed in *Chliaria*.

Chliaria phemis, H. H. Druce.

I find that this species again is better placed in the genus *Chliaria* than in *Hypolycæna*. It is close to *C. amabilis*, de Nicév., but the black spots at the anal angle of the hind wing below are differently placed.

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greyish at outer angle: hind wing—costal margin narrowly greyish from the base to the apex, which is narrowly black; a black anteciliary line; cilia white. The tail on the lower median nervule, linear, black, and tipped with white, that on the submedian nervure about twice as long, black, edged and tipped with white; the lobe dark red, with a black anteciliary line and a small black spot dusted with blue scales. Underside pale grey: fore wing with a broad, even, straight brown band commencing on the 2nd subcostal nervure, rather less than halfway between the end of the cell and the apex, and running obliquely to the lower median nervule, where it becomes somewhat attenuated and reaches the submedian nervure; a submarginal indistinct line darker towards the outer angle, the ground-colour being rather darker between this line and the margin; cilia brown: hind wing with similar bands as described above, the darker one being broken up and angled at the lower median nervure, and running disjointedly to the anal margin; a black spot between the lower median nervules faintly crowned with orange; lobe deep black, bearing towards the submedian nervure a large crescent of bright blue scales; there are also a few blue scales in the submedian interspace close to the lobe; cilia greyish, white towards the anal angle. Head, thorax, and abdomen blackish above clothed with greyish-blue hairs; beneath concolorous with wings; legs grey, with black spots; antennæ black, with reddish-brown tips and white spots.

♂. Upperside violaceous blue, of almost the same shade as *Cyaniris puspa*, Horsf., ♂: fore wing—apex, outer and costal margins black as in male, and with a white spot on the disc beyond the cell, clearest towards the upper median nervule: hind wing—costal margin whitish, grey along the subcostal nervule; outer margin narrowly black, breaking up into spots in the median and submedian interspaces; a large white apical spot, clearest towards the costal margin. Tails and lobe as in male; cilia of both wings white; the dark bands of the underside can be seen through on the upper. Underside differs only from the male in the ground-colour being white; the cilia of both wings are white except towards apex of fore wing, which is brown. There is also a brown anteciliary line to the fore wing, and also to the hind wing, which becomes stronger towards the anal angle.

Expanse, ♂ 1¼, ♀ 1⅜ inch.

Gede, W. Java (*Prèlw*). Types Mus. Staud.

This lovely insect is allied to *Tajuria diæus*, Hew., but is quite distinct.

[1] *Suasa suessa*, de Nicév. J. B. N. H. S. vol. vii. p. 337, pl. H. figs. 8, 9 (1892).

Chliaria mimima, H. H. Druce.

The specimens I referred to from N.E. Sumatra, P. Z. S. 1895, p. 605, are I think, the *C. tora*, Kheil. *C. mimima* is very close to that species, but besides the less extensive blue area above, there is a slight difference on the underside, the large black spot on the outer margin of the hind wing of *C. tora* being surrounded on all sides except its outer edge with yellow, whilst *C. mimima* has this yellow on its inner and anal sides only. I am inclined to believe that the insect which Mr. de Nicéville has described and figured as the female of *C. tora*, Kheil[1], is not that sex of *C. tora* but of *C. amabilis*, de Nicév.[2]

We possess a female from N.E. Sumatra which on the underside is exactly like that of *C. tora* ♂, and like that possesses a small black spot on the costa of the fore wing and a large and a small black spot on the costa of the hind wing. These spots are distinctly shown in Herr Kheil's figure. On the upperside the fore wing is dull brown, immaculate, and the costal half of the hind wing is of the same colour, the anal half being dull greyish white, with a marginal row of indistinct blackish spots between the nervules increasing in size towards the anal angle, a black anteciliary line inwardly bordered by a narrow white line; cilia white. Tails short as in male.

The very worn female specimen referred to by Mr. de Nicéville (*op. cit.* p. 312), from Borneo, is doubtless that sex of the species I have named *C. phemis*. Dr. Staudinger has sent me a male Javan specimen of *C. amabilis*, which has the tails considerably longer than are shown in Mr. de Nicéville's figure.

Charana, de Nicév.

Charana mandarinus, Hew.

Myrina mandarinus, Hew. Ill. Diurn. Lep., *Lycæn.* p. 28, t. 11. figs. 6, 7 (1863).

Kina Balu (*Waterstr.*).

Dr. Staudinger has received a single female specimen, which differs from any Indian females I have seen by having a greater area of white on the hind wing above and by the yellow on the hind wing below being nearly all replaced by white; the black angular markings and spots towards the anal angle are larger and more prominent, so it may possibly represent a different species, but until the male is discovered it is impossible to be certain.

Manto, de Nicév.

Manto, de Nicév. Journ. Bomb. Nat. Hist. Soc. vol. ix. p. 312, March 1895.

Pseudomyrina, H. H. Druce, P. Z. S. October 1895.

The name which I proposed must be sunk as a synonym.

[1] *C. tora*, de Nicév. J. B. N. H. S. vol. ix. p. 311, pl. P. fig. 43, ♀ (1895).
[2] *C. amabilis*, de Nicév. id. p. 306, pl. P. fig. 42, ♂ (1895).

Mr. de Nicéville makes *Myrina hypoleuca*, Hew., the type, whilst mine was *Myrina martina*, Hew.

MANTOIDES, gen. nov.

Allied to *Manto*, de Nicév. Fore wing with three subcostal nervules as in that genus; inner margin longer and deeply bowed outwards just before its middle; a large tuft of long hairs attached to the inner margin where it is thus bowed and lying over a patch of differently placed scales. Hind wing with a very large shining patch from the costal margin extending to the lower wall of the cell, bearing upon it a small patch of differently formed, shining scales, placed at the junction of the subcostal nervule.

Type, *Mantoides licinius*.

This genus belongs to the group which has the inner tail the longest. It differs from *Charana* and *Jacoona* in the possession of secondary sexual characters, and from *Manto* in these characters being differently placed—the tuft of hairs being situated on the underside of the inner margin of the fore wing, whilst in that genus it is on the upperside of the hind wing.

MANTOIDES LICINIUS, sp. n. (Plate XXXI. figs. 10 ♂, 11 ♀.)

♂. Upperside: fore wing blackish brown, slightly paler towards the base: hind wing blackish brown, with the anal third pure white; a very large smooth paler shining patch extending all over the costal margin down to the lower wall of the cell, and reaching to the apex, and bearing on it at the base of the subcostal nervule a small stecly-grey patch of roughened scales; a rather small black spot in the lobe and two larger marginal black spots, one in the submedian interspace, the other in the lower median interspace; an anteciliary black line to the white area, thickening into spots at the termination of the two median nervules; anal margin greyish. Underside: fore wing yellowish buff, darker towards the outer margin; inner margin broadly shining greyish, with a darker central spot covered by the tuft of buff-coloured hairs: hind wing paler buff; anal area whitish, and, as on the upperside, with the addition of an inner band composed of four black disconnected irregular markings divided by the nervules; the black spot on the lobe being larger than on the upperside and crowned with a few blue scales. Thorax and abdomen above brown, beneath buff-coloured; legs buff; antennæ black above, white-spotted below, and with pale brown tips.

♀. Differs only from the male in the upperside being a paler shade of brown and in the absence of the shining patch on the hind wing, and in the pale inner margin of the fore wing below being without the gloss. (The inner margin of the fore wing, as is usual in all this group, is nearly straight.)

Expanse, ♂ $1\frac{7}{10}$, ♀ $1\frac{3}{5}$ inch.

Kina Balu (*Waterstr.* and *Everett*). Types Mus. Staud.

This interesting species is remarkable for the close similarity of